

FRIENDS OF MOUNT DOUGLAS

October 2005



One Man's Ivy

'05 Rankin:
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4285 Cedar Hill Rd.,
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Overview

Since our Society's inauguration in 1989 we have had two long term goals of a quite specific nature. One has been the control of the stormwater that, over years of development within the watershed and in increasing quantities, has been flooding through storm drains into Douglas Creek during periods of heavy rain. The unchecked force of this water, together with the pollution it carries from paved areas,, has endangered existing and potential fish habitat in the Creek. The other goal has been the conjoint protection of the beach and the shoreline. Due to our active input, promising techniques for achieving these two goals have finally been worked out. Much now depends on the political will to see them implemented.

The problem with invasive species

The Friends of Mount Douglas Park Society came into being in 1989 to protect Mount Douglas Park against the erosion of its natural assets. Initially this threat of erosion came from attempts to subdivide land out of the Park to accommodate car traffic and the expansion of facilities for electronic communication. However, since warding off these attempts with some measure of success, we have been faced with something more insidious. This consists in the spread of the invasive species that now are threatening the Park's biodiversity. Among such species, English ivy has been the most destructive. It smothers large areas of native undergrowth and weakens the trees it climbs either by cutting off sap rising from the base or by lowering their resistance to strong winds.

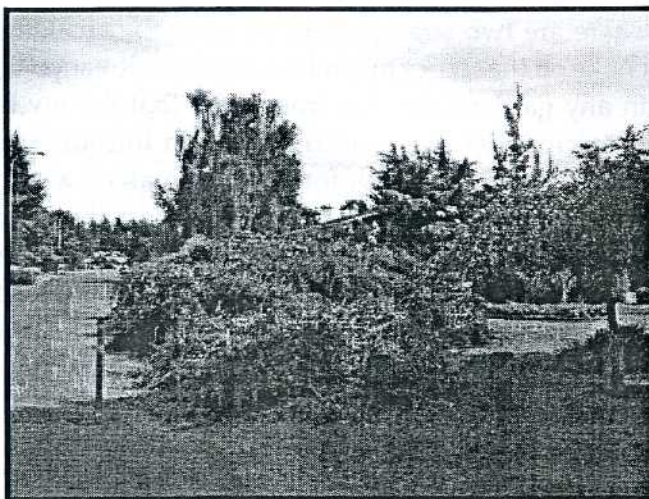
There are two strategies for meeting the challenge posed by this invasion. One is to choke off the source by prohibiting the cultivation of ivy in neighbouring gardens, indeed in any gardens, for it is from there that the ivy has entered the Park. Unfortunately, municipalities are concerned that in introducing such a measure they may expose themselves to criticism for not first making a serious effort to eliminate ivy from the parks under their jurisdiction—an effort they, for lack of man/woman power, think they are not in a position to make. The other strategy consists in recruiting volunteers, mainly from the neighbourhood, who dedicate some of their time to eliminating ivy and other invasive species from parks. Furthermore, the visibility of these volunteers may help the neighbouring community, including gardeners, to appreciate more fully the ecological harm that ivy can do.

One group of volunteers, consisting in part of members of the Friends of Mount Douglas Park Society, has in fact been convening over the past year, on the first Sunday morning of every month, to pull ivy in the Park. On whatever site we may be working we set up notices to inform the public what we are doing and why. Because of the sheer scale of the invasion, so far have been limiting ourselves to attacking smaller, relatively isolated patches to prevent them from spreading.

However, mention of the group effort here has been just for the sake of comparison and contrast. It is not this group but Dick Battles who has been responsible for the major educative impact of this activity. He is a member of our Society but, since Sunday morning is not a suitable time for him, he has been pulling ivy entirely on his own. His output has far exceeded the total pulled by the group over the time of its operation. His efforts have been directed to large areas rather than to isolated patches of the invasion, and resulted in four or five quite enormous piles, the presence of which couldn't possibly be ignored or not remarked upon by walkers on the much-frequented trail on which they were located. The best measure of their mass lies in the fact that, as a precaution against the piles at some stage catching fire, five of the municipality's tractors and two buggies were required to haul them into a holding area off Edgemont Road. From there the mass was taken away in four dump truck loads for disposal. That in itself was quite an eye catcher for all in the neighbourhood.

How much money Saanich Parks invested in this part of the operation we cannot say, but in any case no one can now accuse them of not taking an active part in the attack on the ivy scourge in areas under their direct jurisdiction. (Perhaps, then, the time has now come for the municipality to list ivy as a noxious plant to be prohibited from gardens?) As for the actual pulling, since it was done by one volunteer, no funding or budget was involved in that.

On the cover of this newsletter is a photo of some of the ivy that was hauled away. Here is another:



Eco Star awards

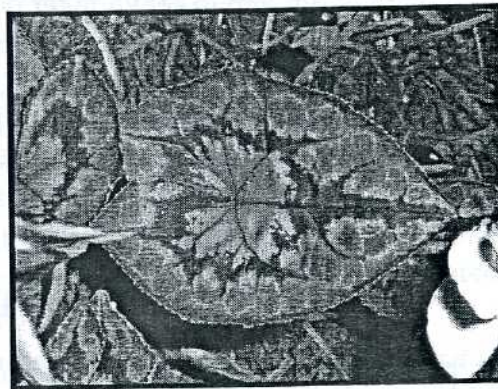
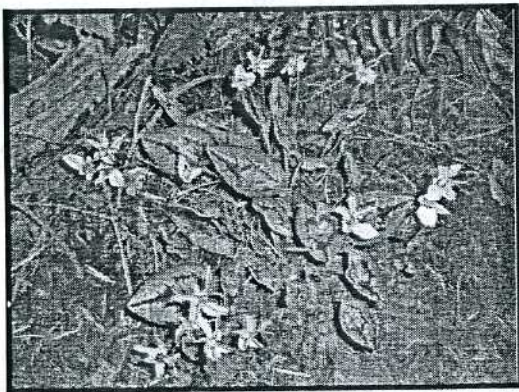
Eco Star awards are given out by the Capital Regional District in recognition of individuals, groups or organizations who raise awareness or take action to protect, restore and rescue damaged and endangered plant life, animals and/or ecosystems. Our Society has nominated Dick Battles for this award for the reasons set out above.

Other invasives?

Ivy and holly and daphne all present a real hazard to the natural flora of Mount Douglas Park, so we don't have to question their removal. But there are other invasives that are less easily classified.

Late this summer the Friends heard from Loukas Raptis, who describes himself as "an amateur naturalist who likes to poke around." One day he was in Mount Douglas Park looking at the fall hatch of termites with his 3-year-old daughter (who "can spot a broken-off termite wing from a mile away") when he spotted a plant on the north side along Douglas Creek that he had never seen before. He couldn't identify it with the help of field guides, and wondered if it might be a garden escape.

We couldn't help him, but he found out himself (and let us know) that it is a *Cyclamen*, already widespread in small woodland areas around Victoria. He thinks it likely that it may grow elsewhere in the Park as well. Here are his pictures of it:



Its flowers are providing continuous nourishment to the tiny hover-fly *Baccha elongata*: he watched many of them visit the flowers every two minutes or so for about an hour.

Bob Bridgeman cites another case—the proliferation of *Aesculus hippocastanum* along the riparian area alongside the Creek. A couple of large examples are at the top end downstream of the fire road culvert. Seedlings are popping up down the length of the Creek. The species is found in wet areas and is naturalized in Victoria. He says these trees provide the structure that we are trying to restore to the Creek—rooted stream banks, leaf and insect input, shade and the potential to create woody debris piles in the Creek - but also displaces native vegetation.

So what to do? Where do we put the *Cyclamen* and *Aesculus hippocastanum* on the priority list for removal of exotics? We confess to not knowing.

Frontrunners Gutbusters

This is an Association that organises Mountain Trail Running Events at locations over BC. Runners from different countries have entered these contests. Since 2003 on a yearly basis Mount Douglas has been one of the sites of these meetings. The most recent meeting here was on June 11th. As usual on this occasion there were two courses for the runners, a short one of 5km to the top and a long one of 12km over 4 summits. The races started from the picnic area by the main parking lot at 10:00am, finished there by 12.30pm, and were followed by prize-giving celebrations.

In pursuit of our aim to get younger people to join our Society, and in the hope that an interest in running the Park's trails might expand into an interest in the welfare of the Park, we secured permission from the organisers to put up our display tent on the picnic site. This at least gave us the opportunity to try out our newly acquired display boards in outdoor conditions. Although some of the runners or their supporters looked into the tent, regrettably none of them signed up. .

The shoreline

What a year it's been for Mother Nature showing just what she can do to the well-laid and not so well-laid plans that people have for securing their shores. At the AGM. Peter Sparanese and John Reedshaw presented the latest developments in the plan for securing the toe of the cliff in the park. However, the next step has been delayed because Peter

has left Saanich Engineering and joined the City of Victoria. We wish him every success for the future and will miss his ability to see beyond the immediate engineering problem to the opportunities that such projects provide for achieving long standing community goals.

The work along Cordova Bay Road from Blenkinsop to the motel is a case in point. By the provision of safe continuous sidewalks and cycle lanes, the number and variety of people coming to the Park has increased dramatically.

Once the work on the beach has been completed, there is every hope that it will provide a similar opportunity for a larger public to enjoy another major aspect of the park. There is cautious optimism that we have found a way forward, not least because the plan tries to work with the forces of nature and does not confront them head on: the key to long-term success will be the quality and extent of the maintenance plan adopted for the structure once it is built. If we have learned nothing else from the events of the last year, it is that anything that stands in the way of the sea needs constant attention.

The events of the last few days highlight how far we have traveled in the last fifteen years. In the aftermath of the New Orleans disaster, the importance of offshore reefs and wetlands in controlling erosion and dampening storm surges has come to the fore. Also, the topic of how fast water should flow in rivers and creeks is under review, as it is now clear that allowing them to meander through the surroundings has a lot of merit. Once the waters in Louisiana retreat, there is going to be a major analysis of what went wrong and, in the aftermath, there is going to be a lot of work for engineers to do around the world. Let us hope that the methods adopted will be a little more sophisticated than placing rip rap on beaches for shoreline protection and putting surface water into pipes to discharge it faster, the two standard prescriptions in use up to now.

As a sideline, we distributed invitations to all the waterfront property owners on either side of the Park to come and hear the presentation at the AGM. Almost all have built their own sea wall protection using different methods, with variations on rip rap being the most frequent. All of them are in some state of disrepair after less than 20 years of life and many owners are interested in collaborating with Saanich to bring material into the bay. Bargaining material in would be one way in which the work could be coordinated to prevent an almost continuous schedule of repair.

It is worrying that people want to continue dumping rip rap on the beach in front of their houses, but fortunately, this can be done through their own properties or through

municipal beach accesses that line the bay north and south of the Park. One alarming suggestion was made to use the Park as the pathway to the beach for the machines and rock needed to repair the rip rap in front of private homes. Using the path beside the creek for this purpose would undermine all the work we and the various government agencies have done in the Creek over the last decade. Also, we certainly do not want a repeat of the mistakes made in the early nineties when a cascade of rock was showered on the beach from the parking lot. The scar on the cliff face is still glaringly visible. If the new shore line protection plan is successful, the residents will see the benefits of moving away from rip rap and this need for access will diminish and finally disappear.

Hopefully, it is also obvious that this is not a time for complacency and that the principle that public amenities must be preserved for the public and not degraded for private interests is still worth defending.

Pollution levels in the creek

The first results from the year long Pisces project have come from Axys Analytical Services and Brian Fowler is busy trying to tease out of the data the numerous strands of contamination that find their way into a stream close to urban development.

The first level of success is the fact that the low-cost method of sample collection devised by Brian has worked extremely well for over a year. From the samples it is clear that there are persistent pollutants and that their levels vary throughout the year. Once the major pollutants have been identified, the task is to see how they vary with rain fall and flow in the creek; this will not be easy but it will provide the ammunition we need to show that the levels are unsafe.

These days it is no good just saying a stream is polluted, you must have numerical data to support your case. The results to date confirm there is a spike of different types of oil after the first rains of the fall. Environmental chemists lump these together and talk about PAH (short for polyaromatic hydrocarbons). The Creek has lots of them and, unfortunately, the highest levels of contamination occur about the time the salmon return to spawn. So we have a strong incentive to see these levels reduced, hence the water shed project below.



The watershed

For a long time, we have had a gut feeling that in order to create a salmon-sustaining habitat in the open part of the Creek we would have to tackle the problem of pollution in the enclosed part of the watershed. Big projects, such as separators at critical points in the discharge system, settling ponds and separation systems at the mouth of the pipe above the weir, as well as extensive small scale projects distributed throughout the watershed have all been considered, but the only one to get beyond the concept stage was the downspout disconnection program, which had very limited success.

A few years ago we received a grant to look at methods of retrofitting the watershed so that the discharge would be purer than it is now. The terms of the grant were rather awkward and we had difficulty thinking through just how we were going to fulfill the requirements. Fortunately, Sheilagh Ogilvie kept bringing us back to the topic and Angela Evans of the Saanich Planning Department provided lots of practical support and encouragement with the result that, about a year ago, we hired the firm of Murdoch Landscape Planning and Design to examine the watershed with a view to recommending three methods of improvement, suggestions for their location and an estimate of the costs.

The report is now complete; Saanich's environmental committee approved it in June and Council approved it in September. Prior to this, we asked the Engineering Department to review and approve it: they have done so and their recommendations are attached to the document approved by Council.

We now have a blueprint for the treatment of stormwater prior to its discharge through the underground pipes. For the Gordon Head watershed it is going to be a matter of retrofitting sites as they come up for repair or redevelopment. It was encouraging to hear the engineers talk of doing some of this work on a small scale already. The next stage will be to try and increase the scope a little and consider a whole street rather than just a particular site on that street. By doing so, it's possible to improve the ambience of a local neighbourhood with little additional cost.

The report should be on our website soon but the line of argument that Scott Murdoch developed is summarized here.

The fundamental idea is to create a set of generic systems that can be mixed and matched for a particular location. The three systems he analyzed were rain gardens, swale rehabilitation and stormwater traffic bulges. The approach was to take the whole

watershed from Gordon Head Road/Mount Douglas Secondary School to Ash and Cedar Hill Road, divide it into eight sub-basins, and then estimate how far each one had been transformed from its original condition, the idea being that spending money in the most degraded areas would produce the best return for every dollar spent. From this analysis he concluded that the area that drains through Laval and Blair to Shelbourne would be the best candidate.

The second level of analysis was based on the observation that about 35% of the watershed is covered with impervious material, water has to be drawn off into the municipal storm sewer system, and pipes for this system lie along the boundary between the public rights of way and private land. Moreover, 10% of the impervious surface is made up of roads and walkways and these are controlled by one agency, the municipality. As 10% of the total area corresponds to more than 30% of the impervious surface, improvements at the boundaries can make an enormous impact on water quality and general aesthetics. For example, generous road widths lead to speeding traffic, but narrowing the road width using stormwater bulges slows the motorists down. Similarly, by defining the parking areas more clearly and using swales between the road and the sidewalk, less space is required for cars and there is an opportunity to produce a pleasing landscape. All of this helps raise the real estate values of the houses nearby, something every home owner likes. With less water going directly into the storm sewer, the system is under less stress and therefore will have a longer life/lower maintenance cost, something all governments like. Finally, the water that eventually gets through the pipe to the Creek contains less pollutants and so the fish like it too.

Overall, thanks to Scott's work, we have the means to make progress in the fight to reduce pollution in the storm water system before the water reaches daylight again.

Douglas Creek calendar

On April 30, 2005 we put in 4 minnow traps in the usual spots. On May 01 we picked the traps up with 5 coho fry averaging 115 mm. These were from the December 12, 2004 transplant. A few emergent fry from the February 27, 2005 eyed egg transplant were spotted. A very large mayfly—an indicator of good water quality unusual for Douglas Creek—was accidentally and randomly picked up in a bucket.

May 29, 2005. A benthic invertebrate survey found only pollution tolerant taxa. On June a survey in a different area gave more or less the same results. Both areas had

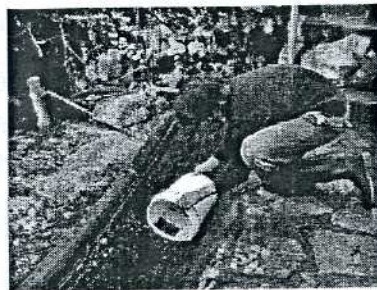
limited habitat values. Other samples have shown many pollution intolerant species—mayflies and caddisflies, more complex species to be found in better habitat like woody debris jams, but not throughout the length of the Creek.

On June 23 I walked the length of the Creek with Fisheries and Oceans Canada Community Advisor Tom Rutherford looking for opportunities to introduce woody debris and on the lookout for wind-throws and other possibilities for improving habitat.

The next day I walked the Creek with Larry Middleton, John Lee and Diane Murry from Saanich Parks and Tom Rutherford from FOC. We discussed the management of habitat in the Creek, e.g., the Ash Road Bridge downstream portion for chum salmon and above the bridge for coho. A limiting factor for chum spawning in the Creek is the amount of gravel on the stream bed. Saanich Parks is going to cut a small piece out of each of two woody debris jams below the bridge; these have trapped the gravel that has migrated downstream, so that some of the streambed further downstream from the jams has very little gravel. Cutting the pieces out should allow the slow migration of gravel downstream. Some of the larger, bolder structures downstream of the woody debris jams should slow the downstream migration of the gravel. Since the watershed of the Creek is mostly in pipes the only gravel that is available to replace the continuous migration downstream is what erodes out of the stream banks. Should this not replenish the spawning beds, we could supplement it with a couple of loads of the ideal-sized triple washed gravel, but only after we see how the gravel that is already there moves.

We looked at windthrows upstream of the bridge. There were three or four good opportunities to put one end of a stem or maybe even a root mass into the channel. Saanich Parks will supply people qualified to do the work, Tom Rutherford will handle the permit process. It can take several years to build such complex habitat units. Several above the bridge have evolved through the years into excellent spots for coho fry.

We discussed last year's successful return of chum and coho to the Creek. These first chum returned three years after leaving. The heaviest brood return is in the fourth year, with a diminished run in the fifth year (as in the third-year run). This year we should have the fourth year run of the first brood year introduced to the Creek and the third year run of the second brood year introduced. We could have quite a few chum come back, plus whatever coho we are fortunate enough to see.



We discussed the best way to manage the public interest in salmon spawning in what is virtually our back yard. Last year's chum spent a lot of time in and just above the tidal reaches upstream of the beach. There is an opportunity to create an improved spawning area there where people could watch the salmon. Enhanced by defined trails and supplemented by native vegetation, this viewing area could supply access to the public while maintaining the naturalness of the Park.

The possibilities are exciting: community, park managers and Fisheries and Oceans Canada all working together to restore a feature of the Park Douglas fir riparian and beach ecosystems. When we see wild production out of the Creek—eggs laid naturally in redds with emergent fry and out migration to the ocean—our program will be ready to move on to this level of activity.

Of course what supports and enables the Creek restoration is stormwater management on the watershed. At a recent open house, Saanich staff were on hand to present concept designs for a Rain Garden to replace the poorly functioning stormwater management pond in the new development at Tyndall and San Juan. There are a lot of opinions around what is appropriate for stormwater management – while we believe ponds have a place as stormwater management, there is also room for different technology. Each should be chosen for its effectiveness in the geology of the location, by cost benefit considerations, and by the acceptance of the people who will live near it.

On July 10 we picked 140 Indian plum and 108 Oregon grape seeds for the riparian plant-out November 2006.

On July 11 we photographed the woody debris opportunities we viewed with Tom. The photos are going to be used for the Section 8 permit request to the Provincial Government for work in and around a stream, putting in the woody debris.

On July 17 we gave a tour of the Creek and an introduction to the restoration to a University of Victoria restoration student; we hope to get a report out of that.

On August 06 we picked seeds for the 2006 plant out: snowberry – 135 seeds; red osier dogwood – 350 seeds; ocean spray – 4 clusters of many seeds; thimbleberry – dry fruit with many seeds; and mock orange – 20 capsules with many seeds.

On August 07 we picked 190 snowberry fruits (seeds in each) for the 2006 plant-out.

On August 18, in the tidal reaches in a pool under a cutbank we saw seven coho fry 60 – 80 mm: smolts heading out to the ocean. Also spotted several fry from the February eyed egg transplant in pools as we walked upstream.

On August 28 we picked about 600 big leaf maple seeds and 600 Douglas maple seeds for the 2006 planting.

All these seeds have been delivered to Rob Hagel at the Pacific Forestry Centre for processing. I say again that this is a fantastic resource for the restoration. Rob and his colleagues at the Centre are supporting a community education project with long-term rewards in the form of a sustainable population of salmon species. We have engaged the community in this project and we have been recognized as educators – not what we set out to do but a result of the many partners and projects we have been involved with.

We don't yet have an inventory for this year's November planting events. Rats got into the greenhouses—seems they are partial to Indian plum and red osier dogwood—so we may not have a lot of those species. We will plant out what we have in 2 or 3 different events. Last year we had over 100 volunteers and 900 seedlings planted. It went extremely well. However, some plants were lost to the summer drought and the deer in the Park have heavily browsed some of the species. Next spring will tell the tale. I don't know what percent survival we will have but I know from experimenting with these plants under ideal conditions that hardy growth can usually be seen from the survivors after the second year in the ground.

This project will cost the Society around \$1000.00 dollars. We have \$400.00 donated by the Pacific Salmon Foundation and something similar from FOC, with our Society funds to make up the difference. The expenses are incurred by bringing in riparian planting specialists from the Peninsula Streams Society to help us manage the crowd and to determine the best planting sites to maximize the survival rate. Saanich Parks is supplying 2 gardeners to manage the project logistics, interact with the crowd, provide information and education, and to maximize the potential for seedling survival.

We attended a Streamkeeper's workshop outside Squamish at the North Vancouver Outdoor School, an outstanding natural area. Some of the salmon enhancement work that has been done there can only be described as textbook. We saw examples of how the restoration perspective matches biology with geology, in the human context, to sustain salmonids into the future. We attended workshops on transplanting carcasses and on the spawning behaviour of chum salmon.

The carcass transplant workshop was interesting in that some of the work we have done here in Douglas Creek has enabled other groups to begin transplanting carcasses under recently-written Fisheries and Oceans guidelines. When we started—thanks to Tom Rutherford we were the first to transplant from one watershed to another—we transplanted under draft guidelines. These have now become the accepted guidelines. Salmon enhancement groups that transplant salmon carcasses are realizing the benefit of the marine-derived nutrients that are brought back to the natal systems – an energy exchange that promotes salmonid habitat and sets the stage for next years emergent fry.

The highlight of the workshop, though, had to be the deluxe presentation by Cornelis Groot, co-editor of Pacific Salmon Life Histories, detailing chum salmon spawning behaviour. It confirmed that there was spawning behaviour in Douglas Creek last year when we saw a female chum, with a male swimming beside her, roll on her side and flip her tail—both digging a redd and signalling her reproductive state.

Fisheries and Oceans Canada hydro-sampled the gravel without turning up any eggs. That's not to say that there weren't any, because only a few representative areas were sampled, but none were proven. In October 2004 we saw, first hand, the extent to which the watershed drainage affects salmon in the stream as we watched the watershed drain so rapidly after each rainfall. This rapid rise and fall of water in the Creek limited movement of the fish. The restriction on movement and the small number of fish increased the impact of predation. We found a few females that had not spawned, with their heads chewed off. It will be interesting to see what happens this fall.

I am sure you've been reading about the Cheakamus River spill of 51,000 litres of caustic soda. This is where that Streamkeeper's workshop (earlier mentioned) took place. We had walked the same banks on which the burnt fish later washed up. The spill into Lake Waubaman a little earlier held the headlines, so the Cheakamus River spill didn't get the attention it deserved. If you'd like to know more, the web address is <http://www.pskf.ca/publications/cheakums05/photos01.html>. The Cheakamus may not recover its productivity in our lifetime.

What happened at Waubaman and Cheakamus, happens in small ways in Douglas Creek from time to time. It's past time safety measures became the rule in dealing with water bodies large and small, before the effects of such environmental disasters run totally out of human control.

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Historian: Pam Lewis

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Please check your address label (above); if it reads less than '05, your renewal time has come. We hope you will continue to support the work of the Society for another year by sending \$5 for each one-year membership to the address below.

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